



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/541,112

06/30/2005

Richard S Potember

1914-SPL

4937

7590

04/18/2007

Francis A Cooch  
Deputy General Counsel  
The Johns Hopkins University Applied Physics Lab  
11100 Johns Hopkins  
Laurel, MD 20723-6099

EXAMINER

JOYNER, KEVIN

ART UNIT

PAPER NUMBER

1744

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|-----------|---------------|
|--|-----------|---------------|

3 MONTHS

04/18/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/541,112

Applicant(s)

POTEMBER ET AL.

Examiner

Kevin C. Joyner

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) 31-48 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 11/21/05, 6/30/05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

- I Group I, claim(s) 1-30, drawn to a system for neutralizing pathogens.
- II Group II, claim(s) 31-37, drawn to a method of neutralizing airborne pathogens.
- III Group III, claim(s) 38-45, drawn to a method of neutralizing airborne chemical toxins.
- IV Group IV, claim(s) 46-48, drawn to a method of neutralizing airborne pathogens and chemical toxins

2. The inventions listed as Groups I-IV do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

As stated under PCT Rule 13, a group of inventions is considered linked to form a single general inventive concept where there is a technical relationship among the inventions that involves at least one common or corresponding special technical feature.

Art Unit: 1744

The expression special technical feature is defined as meaning those technical features that define the contribution which each claimed invention, considered as a whole, makes over the prior art. The single general inventive concept and special technical feature in the instant application comprises neutralizing airborne pathogens using a combination of ultraviolet light and hydrogen peroxide. This special technical feature is taught by Korte in Derwent Publication No. DE 4001305. Therefore, the single inventive concept cannot be considered a special technical feature because it does not make a contribution over the prior art. Consequently, the inventions listed as Groups I-IV do not relate to a single general inventive concept.

3. During a telephone conversation with Mr. Francis Cooch on March 26, 2007 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-30. Affirmation of this election must be made by applicant in replying to this Office action. Claims 31-48 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 4, 5, 12, 16, 18, 19, 23-27 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goswani (U.S. Patent No. 5,93,738) in view of Korte (Derwent Publication No. DE 4001305).

Goswani discloses a system for neutralizing airborne pathogens, comprising:

A. a flow through reaction chamber having:

1. a chamber air inlet at a first end of the reaction chamber to admit air contaminated with pathogens, and
2. a chamber air outlet at a second end of the reaction chamber to release a decontaminated air, and defining between the air inlet and air outlet a passageway, as shown in Figure 3 and disclosed in column 5, lines 28-68 and column 6, lines 1-36.

B. a supply of an aqueous liquid connected to a conduit (that is a nozzle concerning claim 4) that is capable of introducing aqueous hydrogen peroxide into the reaction chamber as disclosed in column 5 lines 29-45, and

C. an ultraviolet light source (24) for introducing UV light into the reaction chamber as shown in Figure 4.

More specifically, the water spray or atomizer unit is configured with a nozzle. Goswani does not appear to disclose that the system includes a supply of aqueous hydrogen peroxide or a supply of ozone (concerning claim 12). Korte discloses a system for neutralizing airborne pathogens in paragraphs 1-13 wherein the system utilizes ultraviolet light immediately preceded by aqueous hydrogen peroxide and ozone in order to further optimize the neutralization process (paragraphs 4, 8, and 9). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Goswani to utilize a supply of hydrogen peroxide and ozone in the reaction chamber in order to further optimize the neutralization process as exemplified Korte.

Concerning claim 5, Goswani continues to disclose that that the reaction chamber further comprises a porous matrix (12) in column 4, lines 33-45. Regarding claim 16, the reference discloses that the system includes a solid support (column 3, lines 50-64; column 4, lines 51-57. In regard to claims 18 and 19, the reference also discloses that the solid support comprises compounds that neutralize pathogens and chemical toxins in column 2, lines 9-30.

Concerning claim 23, the reference discloses that the system is capable of being configured for operation in a continuous mode in column 3, lines 38-52. More specifically, the system is used in conjunction with an HVAC system that is fully capable of running in a continuous mode. With regards to claim 24, the reference discloses that the system is configured to be activated upon demand in column 6, lines 26-59. More specifically the reference discloses "when power is supplied" and "the test unit is

Art Unit: 1744

started", implying that the unit can be turned off and on, which discloses that it can be activated on demand. Regarding claim 25, Goswani discloses that the system further comprises a fan (65) to move air through the passageway. Concerning claim 26, the system also includes sensors (52) that are capable of controlling an amount of hydrogen peroxide in the reaction chamber. More specifically, the sensor detects the relative humidity in the reaction chamber. If the humidity is too low, then the atomizer unit sprays the liquid into the chamber. The sensor is fully capable of detecting an amount of liquid (hydrogen peroxide) and controlling that amount using the atomizer unit (column 5, lines 29-45). Concerning claim 27, Goswani discloses that the ultraviolet light source emits high intensity UV light as broadly defined (column 3, lines 8-37).

Claims 29 and 30 further requires that the concentration of the aqueous hydrogen peroxide solution to be in the range of 1-25 percent. It would have been well within the purview of one of ordinary skill in the art to optimize the concentration of the hydrogen peroxide in the solution in order to maximize the sterilization process efficiently and effectively. Only the expected results would be attained.

7. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goswani (U.S. Patent No. 5,93,738) in view of Korte (Derwent Publication No. DE 4001305) as applied to claims 1, 4, 5, 12, 16, 18, 19, 23-27 and 29-30 above, and further in view of Murphy et al. (U.S. Patent No. 5,972,196).

Goswani in view of Korte is relied upon as set forth above. Goswani in view of Korte does not appear to specifically disclose the device used for the supply of hydrogen peroxide. Murphy discloses a system for the production of ozone and

Art Unit: 1744

hydrogen peroxide used for sterilization purposes (column 13, lines 25-36). The system comprises a hydrogen peroxide generator (referenced as an electrochemical cell) connected to a water supply (74) and a source of electricity as disclosed in column 13 lines 15-63. Concerning claim 3, the system also includes a reservoir of aqueous hydrogen peroxide in the generator in column 21, lines 1-28. More specifically, as broadly defined a reservoir is a place where anything is collected or accumulated. The cathode chamber is blocked to entrap the hydrogen peroxide inside the chamber to increase yield. Therefore, it is a reservoir supplying aqueous hydrogen peroxide. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the hydrogen peroxide generator with a reservoir in the system of Goswani in view of Korte in order increase the production yield of hydrogen peroxide and to supply the system with the liquid in an efficient and effective manner as exemplified by Murphy.

8. Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goswani (U.S. Patent No. 5,93,738) in view of Korte (Derwent Publication No. DE 4001305) as applied to claims 1, 4, 5, 12, 16, 18, 19, 23-27, and 29-30 above, and further in view of Reisfeld et al. (U.S. Patent No. 6,884,399).

Goswani in view of Korte is relied upon as set forth above. Goswani does not appear to disclose the material that the porous matrix is made from or its ability to be removed. Reisfeld discloses a system for the neutralization of airborne pathogens comprising a chamber air inlet and a chamber air outlet, and an ultraviolet light source (20) for introducing UV light into the reaction chamber. The reference also discloses that the system comprises a porous matrix made of aluminum foam (referenced as a



Art Unit: 1744

filter) that is removable in order to provide a matrix that is inflammable and one that can be cleaned and replaced easily (column 4, lines 7-25). As shown in Figures 1 and 2, the matrix is in direct connection with the purifier (10). As shown in Figure 4, the purifier is removable. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Goswani to include the porous matrix made of a metal aluminum foam that is removable in order to provide a matrix that is inflammable and allow the matrix to be removed for maintenance as exemplified by Reisfeld.

9. Claims 10 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goswani (U.S. Patent No. 5,93,738) in view of Korte (Derwent Publication No. DE 4001305) as applied to claims 1, 4, 5, 12, 16, 18, 19, 23-27 and 29-30 above, and further in view of Wen (U.S. Patent No. 6,673,137)

Goswani in view of Korte is relied upon as set forth above. Goswani in view of Korte does not appear to disclose the use of a microwave generator. Wen discloses a system for neutralizing airborne pathogens comprising a flow through reaction chamber with a chamber inlet and a chamber outlet, a supply of aqueous disinfectant connected to a conduit for introducing aqueous disinfectants into the reaction chamber (column 3, lines 24-43), and an ultraviolet light source for introducing UV light into the reaction chamber (column 2, lines 10-35). The reference discloses further that a microwave generator is used in conjunction with a UV source to introduce microwaves into the reaction chamber to increase the effectiveness of the antimicrobial ions from the treated air (column 2, lines 10-35). Therefore, it would have been obvious to one of ordinary

Art Unit: 1744

skill in the art at the time of the invention to modify the apparatus of Goswani to include a microwave generator to introduce microwaves into the reaction chamber in order to further increase the effectiveness of the antimicrobial ions from the treated air as exemplified by Wen.

With regards to claim 28, Goswani does not appear to disclose that the UV light source emits UV light having a wavelength in a range from about 250 to about 300 nanometers. Wen continues to disclose that the ultraviolet light source is a high intensity light source (column 4, lines 10-20) and that the high intensity light source emits UV light at a wavelength from about 240 to 280 nanometers in column 4, lines 60-65 as such is enough energy to kill pathogens. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ultraviolet light source of Goswani to include a UV light source that emits UV light at a wavelength of about 240 to 280 nanometers, as such is a commonly known wavelength with enough energy to kill airborne pathogens as exemplified by Wen.

10. Claims 11, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goswani (U.S. Patent No. 5,93,738) in view of Korte (Derwent Publication No. DE 4001305) as applied to claims 1, 4, 5, 12, 16, 18, 19, 23-27 and 29-30 above, and further in view of Kekez (U.S. Patent No. 5,882,591).

Goswani in view of Korte is relied upon as set forth above. Goswani in view of Korte does not appear to disclose an ultrasonic wave generator to introduce ultrasonic waves into the reaction chamber. Kekez discloses a system for sterilization of biological fluids using ozone citing that ozone is a common disinfectant used to sterilize various

Art Unit: 1744

decontaminates in column 1, lines 11-28. The reference continues to disclose that an ultrasonic generator is used to introduce ultrasonic waves into the reaction chamber so that very fine atomization of the liquid spray can be achieved (column 4, lines 29-50). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Goswani in view of Korte to include an ultrasonic generator to generate waves into the reaction chamber so that very fine atomization of the liquid spray can be achieved as exemplified by Kekez

Concerning claims 13 and 14, Goswani in view of Korte is relied upon as set forth above. Goswani in view of Korte does not appear to specifically disclose the type of ozone supply used in the system. However, it is commonly known in the art to utilize an ozone generator to supply ozone. Kekez also discloses that the ozone of the system includes a supply that is an ozone generator (10) that includes a reservoir (concerning claim 14) that contains ozone (column 4, lines 5-27). More specifically, the ozone generator discloses containing a separation unit to separate the ozone from the oxygen. As broadly defined, a reservoir is a place where anything is collected or accumulated; therefore the separation unit is a reservoir for the ozone. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize an ozone generator with a reservoir in order to introduce the ozone to the reaction chamber in the system of Goswani in view of Korte, as such is a commonly known device that is used for supplying ozone as exemplified by Kekez.

11. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goswani (U.S. Patent No. 5,93,738) in view of Korte (Derwent Publication No. DE 4001305) and

Kekez (U.S. Patent No. 5,882,591) as applied to claims 1, 4, 5, 11-14, 16, 18, 19 23-27 and 29-30 above, and further in view of Murphy (U.S. Patent No. 5,972,196).

Goswani in view of Korte and Kekez is relied upon as set forth above. Goswani in view of Korte and Kekez does not appear to disclose that the system further comprises a mixing chamber for mixing ozone and aqueous hydrogen peroxide. Murphy is relied upon as set forth in reference to claims 2 and 3 above. Murphy continues to disclose that the electrochemical cell is an ozone generator as well (column 13, lines 25-68; column 14, lines 1-56). Concerning claim 15, the ozone and hydrogen peroxide generator (referenced as an electrochemical cell) is also a mixing chamber that is capable of mixing ozone and aqueous hydrogen peroxide. As disclosed throughout the entire document but more specifically in columns 13 and 14 lines 25-68 and 1-68 respectively, the generator (72) produces ozone and hydrogen peroxide in the cathodic and anodic chambers. As disclosed in column 16 lines 46-60 with reference to Figure 7, a mixture of ozone and hydrogen peroxide is sent from the generator (72) to a vessel (102) to sterilize a fluid. Since there is no other place for the hydrogen peroxide and ozone to mix, then it is mixed in the generator. Therefore, the generator is a mixing chamber for mixing ozone and hydrogen peroxide. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Goswani in view of Korte to include the generator of Murphy in order to reduce the number of materials needed and ultimately reduce the cost by supplying one generator for the ozone, the hydrogen peroxide, and the mixing chamber as exemplified by Murphy.

Art Unit: 1744

12. Claims 17, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goswani (U.S. Patent No. 5,93,738) in view of Korte (Derwent Publication No. DE 4001305) as applied to claims 1, 4, 5, 12, 16, 18, 19, 23-27 and 29-30 above, and further in view of Berman (U.S. Patent No. 5,766,455).

Goswani in view of Korte is relied upon as set forth above. Goswani does not appear to disclose that the solid support comprises ozone removal catalysts or that the catalyst is made from platinum. Berman discloses a system for neutralizing airborne pathogens such as chemical and biological contaminants in column 2, lines 10-35. The reference also discloses a solid support that is an ozone removal catalyst made from platinum to increase the efficiency of the degradation process (column 1 and 2, lines 65-68 and 1-5; column 4, lines 1-15). More specifically, since the catalyst is made from platinum then it is an ozone removal catalyst. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the solid support of Goswani to include making the solid support with an ozone removal catalyst comprised of platinum to increase the efficiency in the degradation of the chemical and biological toxins as exemplified by Berman.

13. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goswani (U.S. Patent No. 5,93,738) in view of Korte (Derwent Publication No. DE 4001305) and Kekez (U.S. Patent No. 5,882,591) as applied to claims 1, 4, 5, 11-14, 16, 18, 19, 23-27 and 29-30 above, and further in view of Patapoff et al. (U.S. Patent No. 5,656,246).

Goswani in view of Korte and Kekez are relied upon as set forth above. Goswani in view of Korte and Kekez does not appear to specifically disclose the type of ozone

generator used in the system. However, one of ordinary skill would know that a corona discharge generator may be used in the system, as such is a commonly known ozone generator in the art of sterilization. Patapoff discloses a system for neutralizing airborne pathogens utilizing enhanced ozonation in column 2, lines 15-41. The reference continues to disclose that the system includes an ozone generator and that a suitable ozone generator is one of corona discharge (column 3, lines 14-22). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that the ozone generator in the system of Goswani in view of Korte and Kekez is a corona discharge generator, as such is a commonly used type of ozone generator in the art of sterilization as exemplified by Patapoff.

### ***Double Patenting***

14. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir.

Art Unit: 1744

1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

15. Claims 1, 4, 5-13, 15-17, 22-24, and 27-28 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 4, 5, 7-10, 18 and 19 of copending Application No. 10/257196 in view of Korte (Derwent Publication No. DE 4001305). The claims of the copending application encompass all the limitations from the claims of the instant application except for the introduction of an aqueous hydrogen peroxide. Korte provides this conventional teaching of the neutralization of airborne pathogens utilizing ultraviolet light in combination with hydrogen peroxide in order to increase the effectiveness of the neutralization process.

This is a provisional obviousness-type double patenting rejection.


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin C. Joyner whose telephone number is (571) 272-2709. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on (571) 272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCJ

  
GLADYS JP CORCORAN  
SUPERVISORY PATENT EXAMINER